## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: Abdelilah et al.

Serial No.: To Be Assigned Filed: Concurrently Herewith

For: RECEIVER

RECEIVERS, METHODS, AND COMPUTER PROGRAM PRODUCTS FOR AN

ANALOG MODEM THAT RECEIVES DATA SIGNALS FROM A DIGITAL

**MODEM** 

Date: August 6, 2003

Mail Stop Patent Application Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

## INFORMATION DISCLOSURE STATEMENT CITATION UNDER 37 C.F.R. § 1.97

Sir:

Attached is a list of documents on form PTO-1449. Items 1-103 listed on the PTO-1449 were cited in parent application Serial No. 09/264,085, filed March 8, 1999. Because the benefit of this application is claimed under 35 U.S.C. §120, no copies need to be furnished in accordance with 37 C.F.R. §1.98(d); however, copies will be furnished on request. It is requested that these documents be considered by the Examiner and officially made of record in accordance with the provisions of 37 C.F.R. §1.97 and Section 609 of the MPEP.

spectfully submitted

D. Scott Moore

Registration No. 42,011

**USPTO Customer No. 20792** 

Myers Bigel Sibley & Sajovec Post Office Box 37428 Raleigh, North Carolina 27627

Telephone: 919/854-1400 Facsimile: 919/854-1401

CERTIFICATE OF EXPRESS MAILING

"Express Mail" mailing label number: EV353592232US

Date of Deposit: August 6, 2003

I hereby certify that this paper or fee is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to Mail Stop PATENT APPLICATION, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Traci A. Brown

FORM PTO-1449 U.S. Department of Commerce Serial No.: Attorney Docket Number: to be assigned Patent and Trademark Office RAL919980074US2/4269-61CT LIST OF DOCUMENTS CITED BY APPLICANT (Use several sheets if necessary) Applicants: Abdelilah et al. Group: uknown Filing Date: concurrently herewith U. S. PATENT DOCUMENTS Filing Date Examine Document Number Date Name Class Subclass Initial Appropriate 375 6,002,723 12/14/99 Chethik 317 7 7 375 260 6,005,893 12/21/99 Hyll 708 445 3 6,081,822 06/27/00 Hillery et al. 375 231 4 6,052,412 04-18-00 Ruether et al. 63 5 7/2000 381 6,091,824 Lin et al. 714 708 6 6,148,423 11-14-00 Le Mouel et al. 6,151,364 11-21-00 Ruether et al. 375 254 8 6,151,614 11-21-00 Ikeda 708 322 9 6,141,378 10/31/00 375 222 d'Orcye de Lantremange 10 6,167,095 12/26/00 Furukawa et al. 375 285 222 11 6,240,128 5/2001 Banerjea et al. 375 12 6,292,654 9/2001 Hessel et al. 375 346 375 222 13 6,304,594 B1 10/16/01 Salinger 106 14 6,337,999 1/2002 Orban 381 233 15 6,341,360 1/2002 Abdelilah et al. 375 16 5,517,213 05-14-96 Bhatt et al. 375 232 17 5,526,378 06-11-96 Knutson et al. 375 229 09-16-97 375 233 18 5,668,833 Kurokami et al. 19 375 233 5,742,642 04-21-98 Fertner 20 5,999,349 12-07-99 Choi 360 46 21 4/8/91 Sridhar et al. 370 32.1 5,007,047 101 22 09-28-93 Chennakeshu et al. 375 5,249,205 5.3 23 5,271,011 12-14-93 McMullan, Jr. et al. 371 03-08-94 375 13 24 5,293,401 Serfaty 05-03-94 375 106 25 5,309,484 McLane et al. 26 5,490,169 Blackwell et al. 375 232 02-06-96 27 5,471,508 11/28/95 Koslov 375 344

FORM PTO-14	Attorney Docket Number: RAL919980074US2/4269-61CT			Serial No.: to be assigned				
	(Use several sheets i	f necessary)					<u> </u>	
		Applicants: Abdelilah et al.  Filing Date: concurrently herewith Group: uknown						
<del></del>					Filing Date: concurrently herewith			
28	5,710,793	01/20/98	Greenberg	·	375	232	ļ	
29	5,987,069	11/16/99	Furukawa et a	al	375	285		
30	5,835,538	11/10/98	Townshend		375	295		
31	5,831,561	11/3/98	Cai et al.		341	106		
32	5,809,075	9/15/98	Townshend .		375	340	<u> </u>	
33	5,801,695	9/1/98	Townshend		375	340		
34	5,793,809	8/11/98	Holmquist		375	242		
35	5,784,405	7/21/98	Betts et al.	<del></del>	375	222	<u> </u>	
36	5,778,024	7/7/98	McDonough		375	216		
37	5,768,311	6/16/98	Betts et al.		375	222	<u> </u>	
38	5,761,247	6/2/98	Betts et al.		375	316		
39	5,757,849	5/26/98	Gelblum et al	<u>.                                    </u>	375	222		
40	5,754,594	5/19/98	Betts et al.	<u>:</u>	375.	285		
41	5,729,226	3/17/98	Betts et al.		341	94		
42	5,598,401	1/28/97	Blackwell et	al.	379	94		
43	5,546,395	8/13/96	Sharma et al.	·	370	84		
44	5,534,913	7/9/96	Majeti et al.		348	7		
45	5,528,679	6/18/96	Taarud		379	34		
46	5,528,625	6/18/96	Ayanoglu et	al.	375	222		
47	5,406,583	4/11/95	Dagdeviren		375	5		
48	5,394,437	2/28/95	Ayanoglu et	al.	375	222		
49	5,394,110	2/28/95	Mizoguchi		329	304		
50	5,291,479	3/1/94	Vaziri et al.		379	58.2		
51	5,253,291	10/12/93	Naseer et al.		379	406		
52	5,293,401	3/1994	Serfaty		375	231		
53	5,210,755	5/11/93	Nagler et al.		379	108		
54	5,157,690	10/20/92	Buttle		375	14		
55	5,134,611	7/28/92	Steinka et al.		370	79		
56	5,119,403	6/2/92	Krishnan		375	39		
57	5,119,401	6/2/92	Tsujimoto	<del></del>	375	14	``````````````````````````````````````	

ORM PTO-1449 U.S. Department of Commerce Patent and Trademark Office  LIST OF DOCUMENTS CITED BY APPLICANT				Attorney Docket Number: RAL919980074US2/4269-61CT			Serial No.: to be assigned
	(Use several sheet	Ambigontos Abdolilab et al					
		Applicants: Abdelilah et al.  Filing Date: concurrently herewith Group: uknown					
50	5.067.125	11/10/01	T 1:1	Filing Dat		i I	Group: uknown
58	5,067,125	11/19/91	Tsuchida	<del></del>	370	79	
59	5,052,000	9/24/91	Wang et al.		371	43	
60	5,040,190	8/13/91	Smith et al.		375	4	
61	5,033,062	7/16/91	Morrow et al.		375	7	
62	5,014,299	5/7/91	Klupt et al.		379	98	ļ
63	4,995,030	2/19/91	Helf		370	32.1	
64	4,985,902	1/15/91	Gurcan		375	14	
65	4,972,360	11/20/90		Cuckier et al.		724.04	<del></del>
66	4,901,333	2/13/90	Hodgkiss	Hodgkiss		98	
67	4,890,303	12/26/89	Bader		375	107	<del> </del>
68	4,884,285	11/28/89	Heynen et al.		375	25	
69	4,868,863	9/19/89	Hartley et al.		379	98	<u> </u>
70	4,797,898	1/10/89	Martinez		375	7	
71	4,792,964	12/1988	Yoshida		375	371	·
72	4,760,598	7/26/88	Ferrell Bertrand		380	.44	
73	4,720,861	1/19/88			381	36	
74	4,578,796	3/25/86	Caralambous	et al.	375	8	
75	4,577,310	3/18/86	Korsky et al.		370	58	
76	4,450,556	5/22/84	Boleda et al.		370	58	
77	4,434,322	2/28/84	Ferrell	· · · · · · · · · · · · · · · · · · ·	178	22.13	
78	4,270,027	5/26/81	Agrawal et al	l <b>.</b>	179	81R	
79	4,237,552	12/2/80	Aikoh et al.		370	43	
80	4,132,242	1/2/79	Carroll, Jr.		137	263	
81	4,112,427	9/5/787	Hofer et al.		340	347	
82	4,539,675	9/3/85	Fisher		370	32	
83	3,729,717	4/24/73	de Koe et al.		340	172.5	
84	3,683,120	8/8/72	Schenkel		179	15A	
85	3,557,308	1/19/71	Alexander et	al.	178	69.5	
					1		

FORM PTO-1449 U.S. Department of Commerce Patent and Trademark Office  LIST OF DOCUMENTS CITED BY APPLICANT				Attorney Docket Number: RAL919980074US2/4269-61CT			Serial No.: to be assigned	
	,	Ise several sheets if	ilccessary)		Applicants:	Abdelilah et	al.	<del></del>
				Filing Date: concurrently herewith Group: uknown				
		<del></del>	FORE	IGN PATENT I	·		<del> </del>	L
		Document Number	Date	Co	untry	Class	Subclass	Translation Yes   No
	86	WO 98/37657	8/27/98	PCT		H04L		
	87	WO 96/18261	6/13/96	PCT		H04M	11/00	*
	88	0 669 740 A2	12/14/94	Europe		H04L	27/00	
	89	0 659 007 A2	11/8/94	Europe		H04M	11/06	
	90	0 473 116 A2	8/27/91	Europe		H04N	1/00	
	91	2 345 019	3/19/76	France		H04L	27/10	
		OTHER DO	CUMENTS (I	Including Author	r, Title, Date, Pe	rtinent Page:	s, Etc.)	
	92	Erup, et al., "Interpolation in Digital Modems - Part II: Implementation and Performance," IEEE Transactions on Communications, Vol. 41, No. 6, June 1993, pp. 998-1008						
	93	Fischer, "Signal Mapping for PCM Modems," V-pcm Rapporteur Meeting, Sunriver, Oregon, USA, September 4-12, 1997, 5 pgs.						
•	94	Gardner, "Interpolation in Digital Modems - Part I: Fundamentals," IEEE Transactions on Communications, Vol. 41, No. 3, March 1993, pp. 501-507						
E	95	Humblet et al., "The Information Driveway," IEEE Communications Magazine, December 1996, pp. 64						
	, 96	Kalet et al., "The Capacity of PCM Voiceband Channels," IEEE International Conference on Communications '93, May 23-26, 1993, Geneva, Switzerland, pp. 507-511						
	97	Mueller et al., "Timing Recovery in Digital Synchronous Data Receiver," IEEE Transactions on Communications, Vol. Com-24, No. 5, May 1976, pp. 516-531						
	98	Okubo et al., "Building Block Design of Large Capacity PCM-TDMA Subscriber System and Direct Digital Interface to Digital Exchange," Japan Radio Co., Ltd., Japan, pp. 69-73						
	99	Pahlavan et al., "Nonlinear Quantization and the Design of Coded and Uncoded Signal Constellations," IEEE Transactions on Communications, Vol. 39, No. 8, August 1991, pp. 1207-1215						
	100	Proakis, "Digital Signaling Over a Channel with Intersymbol Interference," Digital Communications, McGraw-Hill Book Company, 1983, pgs. 373, 381						
,	101	Williams et al., "Counteracting the Quantisation Noise from PCM Codecs," BT Laboratories, UK, pp. 24-29						
	102	Ayanoglu, et al.; An Equalizer Design Technique for the PCM Modem: A New Modem for the Digital Public Switched Network, IEEE Transactions on Communications; Vol. 46, No. 6; June 1988; Pages 763-774						
	103	Picchi, G. et al.; A. This paper appear Conference Reco	rs in: Commi	unications, 1988	, ICC '88. Digita			

**EXAMINER**